

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1 (currently amended): ~~A Method for measuring quality of service at the an application level in a telecommunication network (N), characterised in that it comprises the steps of the method comprising:~~

~~monitoring operation of an application by a monitoring apparatus through a network interface;~~

~~providing an activation function (A) for carrying out sessions at the application level on said network (N) storing network data received through the network interface in a buffer of the monitoring apparatus, the network data indicative of a behavior of the network;~~

~~carrying out a session by means of said function (A), by measuring (F) and storing (H<sub>k</sub>), in a set of points (S<sub>1</sub>,..., S<sub>k</sub>,..., S<sub>n</sub>) of said network (N), data indicative of the behaviour of said network and verifying (B) an emergence of a critical situation in relation to said quality of service;~~

~~generatingreceiving a trigger signal at the monitoring apparatus (Trigger) from a remote network entity uponwhen said in response to a critical situation corresponding to the quality of service emerges, of the application; and~~

~~collecting (H)in response to receiving the trigger signal, transmitting, from the monitoring apparatus, the stored network data to a remote network archive, by effect of the generation of said trigger signal, said data indicative of the behaviour of the network measured and stored in said set of points of the network (N), the data thus collected being indicative of the quality of service of the network (N) itself.~~

2 (currently amended): ~~Method as claimed in~~The method of claim 1, characterised in that said step of measuring (F) and storing (H<sub>k</sub>) said data indicative of the behaviour of said network (N) is carried out in a plurality of different points (S<sub>1</sub>,..., S<sub>k</sub>,..., S<sub>n</sub>) of said networkwherein the critical situation is detected based on data from a plurality of monitoring apparatuses.

3 (currently amended): ~~Method as claimed in~~The method of claim 21, characterised in that said ~~step of measuring (F) said further comprising measuring the data~~ indicative of the behaviour of said network ~~is carried out in synchronised fashion (Syne)~~ with at least one other monitoring apparatus in said different points ( $S_1, \dots, S_k, \dots, S_n$ ) of said network.

4 (currently amended): ~~Method as claimed in~~The method of claim 21 or claim 3, characterised in that it comprises the steps of:

- ~~—storing ( $H_k$ ) said data indicative of the behaviour of said network at the level of the corresponding point of said set, and~~
- ~~—collecting said data indicative of the behaviour of said network (N) at a centralised level (H) by effect of the generation of said trigger signal, wherein the archive is configured to store data from a plurality of monitoring apparatuses.~~

5 (currently amended): ~~Method as claimed in~~The method of claim 1, wherein the network entity from which the trigger signal is received includes a centralized coordination apparatus configured to transmit trigger signals to a plurality of monitoring apparatuses, ~~any of the claims 2 a 4~~, characterised in that it comprises the steps of:

- ~~—providing a centralised function (M) for managing the quality of service of the network,~~
- ~~—sending said trigger signal (Trigger) to said centralised function (M), and~~
- ~~—transmitting said trigger signal starting from said centralised function (M) to the points of said set ( $S_1, \dots, S_k, \dots, S_n$ ) in order to proceed with the collection of said data indicative of the behaviour of said network.~~

6 (currently amended): ~~Method as claimed in~~The method of any of the previous claims, characterised in that it comprises the steps of claim 1, further comprising:

- ~~—associating to said an activation function (A) configured to test the operation of the application to a control function (B) sensitive to data that may be indicative of~~ configured to detect the critical situations relating to the quality of service, of the network, and

~~—subjecting said data that may be indicative of critical situations relating to the quality of service of the network to filtering (212) through said control function (B), said control function (B) being able to generate said trigger signal (214) by effect of said filtering function (212).~~

7 (currently amended): ~~Method as claimed in~~The method of claim 6, characterised in that said activation function (A) wherein the activation function and said control function (B) co-operate with each other according to an general agent/server configuration, in which said activation function (A) acts as an agent and said control function (B) acts as a server.

8 (cancelled).

9 (currently amended): ~~Method as claimed in~~The method of any of the previous claims, characterised in that ~~the step of~~claim 1, wherein storing (H) data indicative of the behaviour of said network in a set of points ~~(S<sub>1</sub>,..., S<sub>k</sub>,..., S<sub>n</sub>) of said network (N) entails~~includes storing data relating to a given time window.

10 (currently amended): ~~Method as claimed in~~The method of any of the previous claimsclaim 1, characterised in that it comprises the step of providing at least a respective transmission channel (C, Ct) to forward at least one signal between:

~~—said~~wherein at least one of the trigger signal and the data indicative of the behavior of the network is transmitted through a direct transmission channel to the points of said set (S<sub>1</sub>,..., S<sub>k</sub>,..., S<sub>n</sub>), and

~~—said data indicative of the behaviour of the network (N) measured (F) and stored (H) in the points of said set.~~

11 (cancelled).

12 (currently amended): ~~Method as claimed in~~The method of claim 11, characterised in that it comprises the step of providing in the points of said set ~~(S<sub>1</sub>,..., S<sub>k</sub>,..., S<sub>n</sub>)~~wherein the monitoring

apparatus includes a filtering function (T) to ~~configured to intercept said trigger signal transmitted on said network (N) being monitored.~~

13 (currently amended): A system for measuring the quality of service at the an application level in a telecommunication network (N), the system comprising, ~~characterised in that it comprises:~~

~~—at least one activating apparatus (A) for~~ configured to carrying out sessions at the application level on said network (N),

~~—at least one monitoring apparatus (S<sub>1</sub>, ..., S<sub>k</sub>, ..., S<sub>n</sub>) configured to measure (F) and store (Hk) in a set of points (S<sub>1</sub>, ..., S<sub>k</sub>, ..., S<sub>n</sub>) of said network (N) data indicative of the behaviour of said network,~~

~~—at least one testing apparatus, separate from the at least one monitoring apparatus, (B) configured to test for the occurrence of detect a critical situations related to said quality of service and to generate, at the emergence of a in response to said critical situation, a warning trigger signal (Trigger), and~~

~~—a collecting apparatus (H) configured to collect, by effect of in response to the generation of said trigger signal, said data indicative of the behaviour of the network measured and stored in said set of points of the network (N) at least one monitoring apparatus, the data thus collected being indicative of the quality of the network (N) itself.~~

14 (currently amended): ~~System as claimed in~~ The system of claim 13, characterised in that it comprises a plurality of said ~~further comprising a plurality of monitoring apparatuses (S<sub>1</sub>, ..., S<sub>k</sub>, ..., S<sub>n</sub>) configured to measure (F) and store (Hk) in a plurality of different points (S<sub>1</sub>, ..., S<sub>k</sub>, ..., S<sub>n</sub>) of said network (N) said data indicative of the behaviour of the network (N).~~

15 (currently amended): ~~System as claimed in~~ The system of claim 14, characterised further comprising in that it comprises a plurality of synchronisation modules (Syn) associated to with said plurality of monitoring apparatuses (S<sub>1</sub>, ..., S<sub>k</sub>, ..., S<sub>n</sub>) to measure (F) said data indicative of the behaviour of said network (N) in synchronised synchronized fashion on said different points (S<sub>1</sub>, ..., S<sub>k</sub>, ..., S<sub>n</sub>) of said network (N).

16 (currently amended): ~~System as claimed in~~The system of claim 14~~13 or claim 15,~~  
~~characterised in that said plurality of monitoring apparatuses ( $S_1, \dots, S_k, \dots, S_n$ ) wherein the at least~~  
~~one monitoring apparatus further comprises:~~

~~—a memory ( $H_k$ ) for~~configured to storing ~~at the level of the corresponding point of said~~  
~~set ( $S_1, \dots, S_k, \dots, S_n$ ) said data indicative of the behaviour of said network, and~~

~~—a transmission module ( $M_k$ )~~configured to transmit ~~said data indicative of the behaviour~~  
~~of said network ( $N$ ) to said collecting apparatus ( $H$ ) in response to~~by effect of the generation of  
~~said trigger signal.~~

17 (currently amended): ~~System as claimed in~~The system of any of the claims 13 a 16~~claim 13,~~  
~~characterised in that it comprises~~further comprising an central management apparatus for the  
~~central management ( $M$ ) of the quality of service of the network separate from the at least one~~  
~~monitoring apparatus, wherein the central management apparatus is configured to received said~~  
~~trigger signal ( $Trigger$ ) from said at least one testing apparatus ( $B$ ) and to broadcast said trigger~~  
~~signal to said at least one monitoring apparatus ( $S_1, \dots, S_k, \dots, S_n$ ).~~

18 (currently amended): ~~System as claimed in~~The system of any of the claims 13 a 17~~claim 13,~~  
~~characterised in that said~~wherein the ~~at least one activating apparatus ( $A$ ) and said at least one~~  
~~testing apparatus ( $B$ ) mutually co-operate according to a general agent/server configuration, in~~  
~~which said activating apparatus ( $A$ ) acts as agent and said verification apparatus ( $B$ ) acts as~~  
~~server.~~

19 (currently amended): ~~System as claimed in~~The system of any of the previous claims 13  
~~through 18~~claim 13, wherein the at least one monitoring apparatus is configured to monitor for  
~~the data through at least one interface used by an application in the network, for measuring the~~  
~~quality of service of a telecommunication network comprising a plurality of interfaces ( $G_i, G_b$ ),~~  
~~characterised in that said at least one monitoring apparatus ( $S_1, \dots, S_k, \dots, S_n$ ) is an apparatus for~~  
~~monitoring the data transiting on one of said interfaces ( $G_i, G_b$ ).~~

20 (currently amended): ~~System as claimed in~~The system of any of the previous claims 13 through 19~~claim 13, characterised in that said~~wherein the at least one monitoring apparatus ( $S_1, \dots, S_k, \dots, S_n$ ) comprises a memory ( $H_k$ ) dimensioned to store at least a portion of the data indicative of the behaviour of said network ( $N$ ) relating to a given time window.

21 (currently amended): ~~System as claimed in~~The system of any of the previous claims 13 through 20~~claim 13, characterised in that it comprises at least one respective~~further comprising at least one transmission channel ( $C, Ct$ ) to forward at least one signal between:

- said trigger signal to said at least one monitoring apparatus ( $S_1, \dots, S_k, \dots, S_n$ ), and
- said data indicative of the behaviour of the network ( $N$ ) ~~measured ( $F$ ) and stored ( $H$ )~~ starting from said at least one monitoring apparatus ( $S_1, \dots, S_k, \dots, S_n$ ).

22 (cancelled).

23 (currently amended): ~~System as claimed in~~The system of claim 22~~13, characterised in that said~~wherein the at least one monitoring apparatus ( $S_1, \dots, S_k, \dots, S_n$ ) comprises an additional filtering module ( $T$ ) configured to intercept said trigger signal transmitted on said network being monitored ( $N$ ).

24-31 (cancelled).

32 (new): One or more computer readable media storing computer readable instructions that, when executed, cause an apparatus to:

- monitor operation of an application through a network interface;
- store network data received through the network interface in a buffer of the apparatus, the network data indicative of a behavior of the network;
- receive a trigger signal from a remote network entity in response to a critical situation corresponding to quality of service of the application; and
- in response to receiving the trigger signal, transmit the stored network data to a remote network archive.

33 (new): The one or more computer readable media of claim 32, wherein the apparatus is a monitoring apparatus and wherein the critical situation is detected based on data from a plurality of monitoring apparatuses.

34 (new): The one or more computer readable media of claim 32, wherein the computer readable instructions, when executed, further cause the apparatus to measure the data indicative of the behavior of said network in synchronized fashion with at least one other apparatus in the network.

35 (new): The one or more computer readable media of claim 32, wherein the archive is a centralized archive storing data from a plurality of network apparatuses.

36 (new): The one or more computer readable media of claim 32, wherein the network entity from which the trigger signal is received includes a centralized coordination apparatus configured to transmit trigger signals to a plurality of network apparatuses.

37 (new): An apparatus comprising:

a processor;

a buffer; and

memory storing computer readable instructions that, when executed, cause the apparatus

to:

monitor operation of an application through a network interface;

store network data received through the network interface in the buffer, the network data indicative of a behavior of the network;

receive a trigger signal from a remote network entity in response to a critical situation corresponding to the quality of service of the application; and

in response to receiving the trigger signal, transmit the stored network data to a remote network archive.

38 (new): The apparatus of claim 37, wherein the computer readable instructions, when executed, further cause the apparatus to measure the data indicative of the behavior of said network in synchronized fashion with at least one other network apparatus.

39 (new): The apparatus of claim 37, wherein the remote network archive is configured to receive data from a plurality of network apparatuses.